

Application No. 10/F 35,290
Response to 8 October 2004 Non-Final Office Action

REMARKS

Claims 1-25 are pending. By this Amendment, claims 1-2, 4, 7-8, 10-14 and 16-25 are amended.

Claim 1 is amended to include the limitations of originally filed claim 10 and to clarify that the claimed brake control relates to the parking brake control. Claim 1 recites that when applying the parking brake, the controller causes the drive circuit to supply a predetermined constant voltage to the electric motor for a first predetermined period and that, after the first predetermined time period has elapsed, the controller causes the drive circuit to supply a re-pressing voltage, which is determined based on a temperature of the electric motor, to the electric motor for a second predetermined period.

As described in the specification, e.g., at page 13, line 6 to page 14, line 3, a control of the braking force generated by the present electric parking brake system includes two stages: initial braking and re-pressing. After the initial braking, the re-pressing is performed for compensating influences of the temperature of the electric motors 27. Specifically, due to a temperature raise, the torque of the electric motors 27 is lowered, which reduces the braking force. When applying the parking brake, the ECU 14 first supplies a first voltage V1 (corresponding to the claimed constant voltage) to the electric motors 27 for a first period T1. Then, to compensate for the reduced braking force, the ECU 14 supplies a second voltage V2 (corresponding to the claimed pre-pressing voltage) to the motors 27 for a second period T2. Accordingly, the decrease in the braking force due to the temperature raise of the electric motors 27 is compensated for.

Poertzgen et al. (US 6,394,235) discloses a parking brake control performed by an electric parking brake system. However, Poertzgen et al. does not disclose or suggest that the control of braking force is performed at two stages to compensate for the decrease in the braking force due to the temperature rise of the electric motor. Shirai et al. (US 6,425,643) fails to

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disclose a parking brake control and a two-stage control of braking force. Mohr et al. (US 6,328,388) also fails to disclose a parking brake control and a two-stage control of braking force.

Because none of Poertzgen et al., Shirai et al., or Mohr et al. discloses or suggests the foregoing limitations, claim 1 is patentable over the cited references. Thus, withdrawal of the rejection of claim 1 for obviousness under 35 U.S.C. § 103 is respectfully requested. Claims 2-12 depend directly or indirectly from claim 1. Hence, withdrawal of the obviousness rejections of these dependent claims is respectfully requested as well.

Independent claims 13, 24, and 25 are amended to recite the same limitations as recited in claim 1. Therefore, claims 13, 24, and 25 are patentable over the cited references and withdrawal of the rejections for obviousness with respect to claim 13 and the anticipation rejections under 35 U.S.C. § 102 with respect to claims 24 and 25 are respectfully requested. Claims 14-23 depend directly or indirectly from claim 13. Hence, withdrawal of the obviousness rejections of claims 14-23 is requested as well.

Claims 10 and 21 are amended to recite that the second predetermined period (T2) is shorter than the first predetermined period (T1) and the re-pressing voltage (V2) is greater than the predetermined constant voltage (V1). The support for this limitation can be found, e.g., in Figure 8.

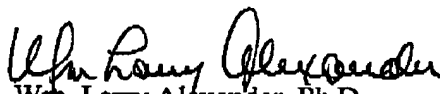
Conclusion

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

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The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,


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